Minutes from CHPS Meeting Thursday October 29, 2009

Attendees:

ABRFC – Billy Olsen, Eric Jones
CNRFC – Rob Hartman
NERFC – Rob Shedd, Alison Gillis
NWRFC – Joe Intermill
NOHRSC – John Halquist
Deltares – Edwin Welles
OCWWS – (Absent)
OHD – Pedro Restrepo, Jon Roe, Mark Fresch, Chris Dietz, Lee Cajina

Pre-reading:

- Development candidates for the next release of CHPS - email from Edwin Welles, subject "Development Registry -- Oct 28" distributed to the chps_migration info list on Oct 28.

1. Review Support Log

No new major blocking issues.

Item #64 (PI web service broken for gxsets), ABRFC – not a blocker for parallel operations but important.

Item #12 (SREF grib2 import), NERFC – temperatures are not being converted. ABRFC said they experienced a similar problem that was resolved by doing an import conversion; Eric will forward an email with guidance to Rob Shedd.

Action: none.

2. Testing XEFS at CAT sites

After some discussion the XEFS team members agreed to run XEFS components on an Offline system – i.e., hardware separate from the chps servers, so that XEFS won't interfere with CHPS performance optimization activities. CNRFC has a server for this purpose; other RFCs might consider using the REPs, which were originally targeted for running ensembles. Deltares has agreed to develop instructions for setting up an Offline system and will provide them to the CAT.

Concerning the impact on RFCs during CHPS transition: OHD suggests that the CAT RFCs limit the number of basins to be used for XEFS. CNRFC will be testing all XEFS software components; ABRFC will limit its testing to HMOS and EPP3. DJ's group (HEP) will provide extra support to help RFCs with calibrations. CNRFC will try to provide as much test support as possible under the circumstances – they can conduct test runs, but they might

have limited capacity to evaluate any results. Bill Lawrence - the primary focal point for ABRFC - is now the SCH; Eric (DOH) will become more involved with HMOS.

Mark's group will develop installation and setup instructions for beta testing within the next few weeks at CNRFC; the plan is to spend one day walking through the installation remotely with CNRFC staff. HSEB will then distribute final instructions to the other three RFCs in Nov/Dec. NWRFC requested maximum assistance from OHD to get them up and running, such as conducting the installation/setup directly.

Chris repeated the need for all RFC staff testing XEFS to go directly to XEFS focal points for support-related issues; they should not involve existing CHPS support resources (HSD/Randy, Deltares/Peter) who are already fully occupied with CHPS BOC, and who are on the verge of needing to provide support for the CAT-II CHPS activities. There should be little need for CHPS core support while running XEFS. However Deltares has already volunteered to provide some training to HSD to help them more readily identify XEFS problems and correctly redirect the request to the appropriate OHD resources.

Action: [all actions should be captured within notes from the XEFS meetings]

3. Prioritize November software release content (ref: pre-reading)

Edwin suggests we revisit priorities for some items. These include the following:

Row 15: this is likely a Section 508 compliance item and although ranked average was 3.5 it should be raised to 2.0.

Row 25 and Row 26: these should probably be priority 1.0. Deltares is unable to reproduce symptoms. Edwin will discuss further with ABRFC/Eric.

Row (tbd) [sacco and sacbasef mods]: these are blockers for 2 RFCs and should be priority 1.0. They are already fixed and will be in the next patch.

Row 34: Although only an issue for one RFC (AB) it's a blocker for them as they run a QPF/0-QPF ensemble. Suggest the priority be increased to 1.0.

Row 53: Based on ABRFC experience, application of mods to ensembles is not an On/Off thing; it's more complicated (e.g. apply for observed but not to forecast – i.e. on sometimes and off other times). Although application will be local policy, Deltares suggested they begin the work needed to support the more complicated rules and raise the priority accordingly. CNRFC is not prepared to make any decisions yet, and prefers to wait until they also have some experience with ensembles. ABRFC said they could live with On/Off for now. The group agreed to leave the priority alone. OHD also verified with the group that there is no requirement to implement ensembles-related techniques for BOC.

Row 78: Documentation has always been an issue but is now reaching 'blocking' status. Deltares plans to address all documentation tests during the next SAT. It will be assigned a priority of 1.0.

Row 79: (associated comment is erroneously shown in row 82) FFG development was ranked 3.5 but is clearly a blocker to operations and should be raised to 2.0.

> CNRFC thought we had agreed at the Tulsa CAT workshop to enhance the existing NWSRFS method for CHPS, not simply reproduce the same method. CNRFC said they had demonstrated some years ago that the calculations in NWSRFS/FFGS were in fact unreliable and unrealistic and they no longer issue FFG or FFH. CNRFC asserts that we should not put any effort into recreating the same bad NWSRFS algorithm.
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> Part of the problem is that no one knows what good FFH values should be (i.e., the 'truth'). RobH believes a more realistic calculation lies in routing the water (iteratively) all the way down the basin to the outlet. Deltares/HSEB agreed to take a closer look at this option.
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> HSEB/Lee and Deltares/Edwin+Peter have settled on an immediate implementation approach which does recreate the existing method; most of the work will be done by OHD not Deltares. Lee suggested his team could have something ready in March 2010. Lee received confirmation that the CAT is only requesting FFH functionality, and not FFG. OHD agreed to take a minimalist approach for FFH because the existing algorithm is known to be invalid. Edwin pointed out that the reverse-engineered algorithm (based on existing code) yields theoretical values that are reproducible and make sense; it's possible there's a bug in the NWSRFS code. Edwin also reported that the 1, 3, and 6 hour FFH values are calculated identically; application of the unit hydrograph peak is what makes the difference.
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> NERFC said they can't yet say if the gridded FFGs are acceptable. RobS will need a year – i.e. including a cool season – to know for sure. Pedro pointed out that the DHM-TF has snow incorporated and this approach shows great promise (from Chris: it would also need to run outside CHPS like HL-RDHM). The issue with DHM-TF is that it's targeted for the WFOs and thus requires a policy/plan change from OHD/regional HSDs, promulgated to the WFOs.

There was an ongoing discussion about the ranking methodology and the timings of various priorities. From Edwin: anything ranked 1.0 is expected to be included in the (early) November patch; anything ranked 1.x, 2.0, and some 2.x could be included in the November/December release to be distributed to CAT RFCs mid-December after SAT.

If the purpose of parallel operations is to validate that everything in the system works correctly prior to switching off NWSRFS, then all items on this list related to broken functionality have to get the highest priority. Deltares can't put everything into the patch; we must do things smartly. It was pointed out that taking an average is meaningless, as it

doesn't reflect the variability across the offices. Edwin agreed to reissue another version of the inventory showing the minimum value assigned to each row. He also agreed to highlight items which would be targeted for the November patch and December release. The CAT agreed to review their rankings via email by COB Friday, and flag any that seem to be mis-categorized. We must conclude this exercise very soon, because we're almost in November.

Action: Deltares/Edwin to reissue the development registry with minimum value and targeted release included. Then the CAT RFCs will flag any rankings they think are mis-categorized. Target completion date is COB Friday Oct 30.

Next meeting: Thursday November 5.